

Volume 1-Issue 1
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Show Me Agriculture



TEACHER PAGE

USING **SHOW ME AGRICULTURE**

Maybe you haven't thought about it but agriculture is everywhere. It has been said that you can't have an Ag-less day. Just think, from the moment you got up this morning you have been using agricultural products. This includes everything from the obvious food and fiber items to less well-known by-products in the tires of your car or in your students' bottles of glue.

Did you know that agriculture is Missouri's largest employer? When you consider that only 1 out of every 129 Americans is a farmer, this demonstrates that agriculture is far more than just being a farmer. "Old MacDonald Had a Farm" no longer represents modern agriculture. A modern farm is highly specialized and requires support from numerous agricultural businesses.

The Missouri Department of Agriculture is pleased to present **Show Me Agriculture**.

Show Me Agriculture provides up-to-date insights about Missouri agriculture, but also provides your students with an occasional look back at agriculture history. For example in this first issue your students will learn to interpret agricultural statistics from the 1990's while also learning about what was new at the 1904 World's Fair in St. Louis. **Show Me Agriculture** is prepared and classroom tested by Missouri educators and will be published quarterly.

Have you thought about including agriculture as a means of teaching some of the new Show Me Standards? Each of the activities in **Show Me Agriculture** were developed to meet specific standards.

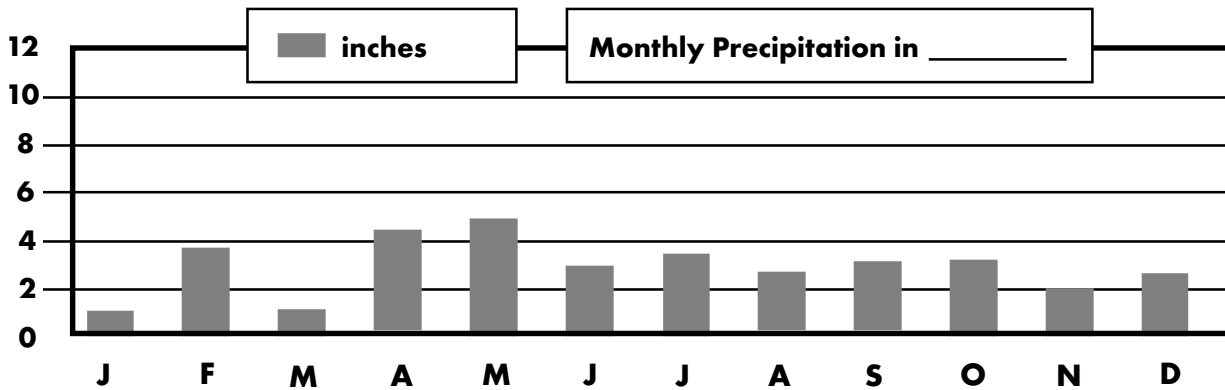
Page 1. **GOALS 1.8, 1.10 and 2.3: CA 6, SS 6**

You may need to guide your students through this list. They may have trouble starting this activity as they begin to think of agricultural products. For example: If your students are using wooden pencils—the wood was probably grown on a commercial tree farm that is a part of agriculture! The cotton in their denim jeans may have been grown on a farm in the boot heel of Missouri. Read the ingredients on a soft drink can with your students. The natural sweeteners may have been grown in a cornfield in central Missouri. Did anyone use hand cream today? Many hand creams and soaps contain lanolin that is extracted from wool that may have come from Missouri sheep. Did anyone play with a football or baseball at recess today? The leather that they are made of may have come from Missouri livestock. After your students have completed page one, you might reverse the activity and have them make a list of things that they have done or used today that **didn't** have something to do with agriculture. This may be harder than you think!

CONTINUED PG 2

Page 2. **GOALS 1.7 and 1.8: MA3, MA6, SS 7**

All kinds of Missouri and agricultural data are included in *Missouri Farm Facts*, an annual publication of the Missouri Department of Agriculture. If your library does not have *Missouri Farm Facts* contact the Missouri Department of Agriculture for a copy for your school. A chart showing precipitation data is reprinted from *Missouri Farm Facts*. Students are encouraged to use this data to create a simple bar (or column) graph. You may prefer to provide students with a sheet of graph paper so they may experience all aspects of graphing. A sample answer follows using Kansas City data:



Page 4. **GOALS 1.7 and 1.8: CA 3, CA 6. MA 1, MA 3**

Reading and interpreting tables of specific information is an important life skill. **Page 3** includes agricultural statistics from *Missouri Farm Facts*. Take students through the proper procedure of reading tables for information – Read all headings that describe the information found below each heading. The word problems will allow students to practice interpreting data found in the table.

Answers:

2nd; 102,000 farms; \$5,564 million; 7,194,000 tons of hay; 1,128,000 hundredweight of watermelon; (*Texas) 1,990,000 beef cows; 22,000,000 turkeys; 166,713,000 pounds of cheese; 15,096,000 gallons of ice cream

Page 5. **GOAL 3.7: MA 1**

Multiplication problems found on the piglets will equal the numbers found on the sows. Students may color the sows three different colors and then color their matching piglets with the same color. You may want to reverse the process and have students create their own problems to equal new answers.

Answers:

Sow 72 - pigs 18X4; 6X12; 24X3; 9X8

Sow 42 - pigs 14X3; 6X7; 21X2; 3X2X7

Sow 54 - pigs 9X6; 3X2X9; 27X2; 3X2X3X3; 3X9X2; 18X3

Pages 6-8. **GOALS 2.3 and 4.1: SS 2, SS 4, SS 5, SS 6**

The 1904 World's Fair in St. Louis is an interesting part of Missouri's history. We hope that the readings about the World's Fair will give your students a greater appreciation for the history of some of the technological and agricultural innovations that were introduced to fair visitors. A black line master has been provided for the mapping and advertisement. Discussions of the World's Fair provide great opportunities for critical thinking particularly in the areas of technology and sociological ethics.

Answers:

1999 - 1904 = 95 years since the World Fair.

12 steaks X 10 sets per 60 minutes = 120 steaks per hour.

Page 7. **Leading the critical thinking activities:**

Electricity is an important technology that most students and teachers take for granted. Leading the discussion about all of the things in your students' lives that are possible due to electricity will result in an extremely long list. Rural electrification came to farms in the middle part of the 20th century, particularly in the 30's and 40's. Electricity has allowed a greater efficiency of production of virtually all agricultural products. A farmer can now milk a much larger number of cows with less labor, grain can be moved using electric elevators, and the list goes on and on. However, your students probably will not think of such things as farmers using information on their computers and on the Internet to improve production and marketing. To initiate critical thinking, you might consider having students work in groups. Individual groups might consider topics such as A) How our Kitchens would be different if we did not have electricity. B) How our grocery stores would be different if we had no electricity. C) How our animal farms would be different if we had no electricity. D) How our crop farms would be different if we had no electricity. E) How food would be stored if we had no electricity. Encourage students to think broadly.

We need to know about different cultures today, just as people in 1904 needed to know about other cultures. Understanding different cultures is an important part of developing diversity. As you lead the discussion on world cultures, help your students to see that learning about different cultures should not be staged in such a way as to make it appear that one culture is superior to another. This appears to have been the case in some instances in 1904. For example, it was known that one tribe from the Philippines that was "on display" during the fair occasionally ate dog meat on special occasions. It appears that this tribe may have been encouraged to consume dog meat virtually every day during the fair for the entertainment of fair visitors. One wonders if this is where the "hot dog" story came from. So as students consider ways to learn about other cultures, ideally, their suggestions will not result in stereotypes being formed from biased information.

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Call or write to request the national Ag in the Classroom newsletter "NOTES." It's a great resource to find out what is going on with integrating agriculture into the classroom in all 50 states!

**United States Department of Agriculture
Ag in the Classroom
Dorothy Jackson, Director
4309-S 1400 Independence Avenue South
Washington, DC 20250-0991
(202) 720-7925**

Questions or comments regarding Show-Me Agriculture are welcome; Please contact:

**Marla Young
Missouri Department of Agriculture
P.O. Box 630
Jefferson City, Missouri 65102
(573) 751-2670 phone
(573) 751-1784 fax
myoung@mail.state.mo.us**

Additional Resources:

Diane Olson
Missouri Farm Bureau Federation
Ag in the Classroom Program
P.O. Box 658
Jefferson City, Missouri 65101
(573) 893-1400
e-mail: proed@computerland.net
Call or write for more information on:
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